



FabAccess v0.4

~ digging ^ Stuttgart ~

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reset 1 bit - machine off. Done.

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Well, turn's out ... not that easy.

Why do we need it anyway?

- There are two kinds of machines
 - those who hurt people
 - and the others.
- There are two kinds of workspace users
 - those who clean up
 - and the others.

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***If you need to get along with all four of them
... *gl,hf* - or use *FabAccess*.***

Why wasn't it that easy?

| role based access | federation | safety |

| security | attribute based access | stability |

| easy to install | modularity | different machines |

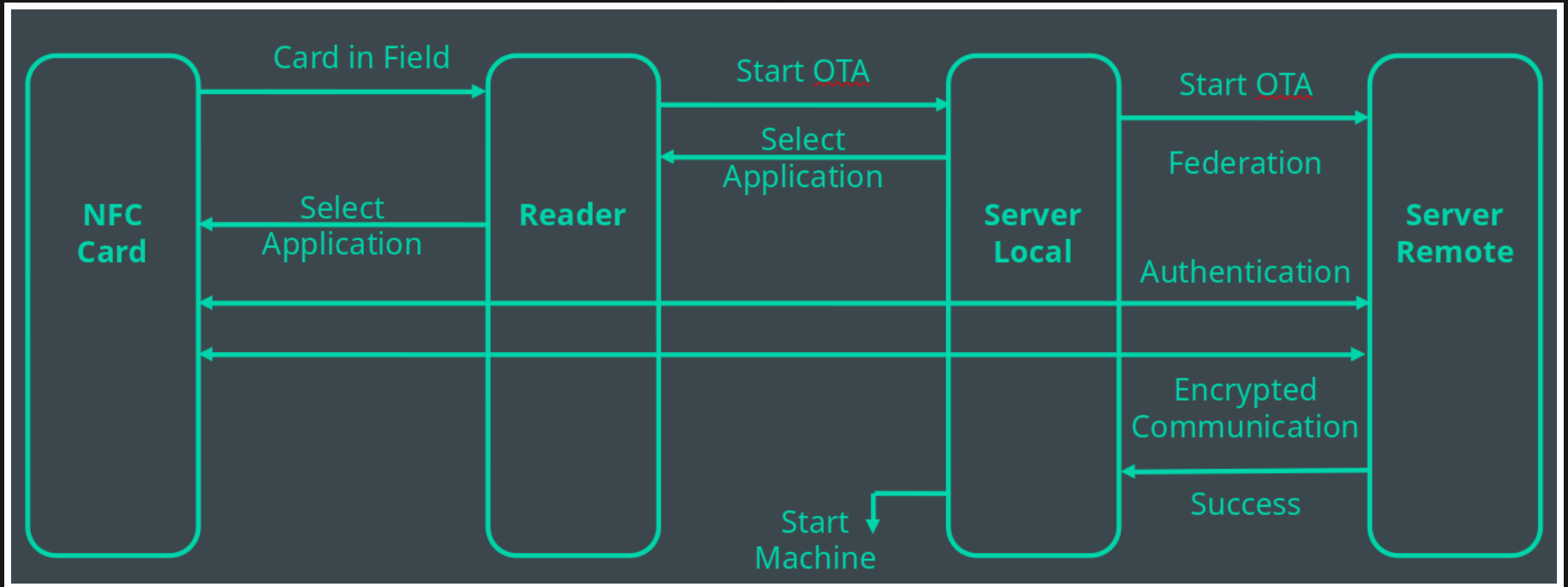
| accessibility | time&money | different workshops |

| complex activation schemes |

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role based access	federation	safety
security	attribute based access	stability
easy to install	modularity	different machines
accessibility	time&money	different workshops
complex activation schemes		

***We wanted (and needed) a lot
more than "works for me"
(TRL9)***



Scan QR-Code

Schlüssel

Schließfach Schlüssel

In Use



Tools

Handbohrmaschine

In Use



Poliermaschine

Free



Tauchsäge

Free



Winkelschleifer

Free



Werkstatt

Bohrmaschine B15

Free



Bohrmaschine
Unimax 1

In Use



HOW STANDARDS PROLIFERATE:
(SEE: A/C CHARGERS, CHARACTER ENCODINGS, INSTANT MESSAGING, ETC.)



Perspectives

- for the workspace manager, the system should ...
 - ensure safe operation
 - enforce some social guidelines
 - ... and ...
 - be easy to install & configure
 - be stable to operate
 - be maintained with little to no effort

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... fit into the workspace - not make the workspace fit into FabAccess.

Perspectives

- for the workspace user the system should...
 - be easy to access
 - be fast & clear to use
 - reduce effort

Ease of installation & configuration

- Installation is actively documented @ readthedocs.
- Configuration via dhall / toml-files
 - GUI would be great
 - the files are well documented - and you only touch them once.
- Attaching new machines is easy via python / bash / ...
 - growing nr. of examples are @ gitlab

Stability

- selected programming languages / Frameworks
 - backend: rust
 - API: Cap'n Proto
 - reference client: C# / Xamarin
 - actively thinking about AvaloniaUI to address GTK / Linux

Maintenance

- backward-compatible config & API as of version 1.0
 - structured log files of events
-

Accessibility

- App is in most app-stores (including FDroid)
- Free apk available

Usage

- Sensible messages via OLED / ePaper display
 - Federation
-

Effort / speed of usage

- Machines can be activated via NFC card

Supported hardware devices

Out of the box

- DESfire EV2
 - FabReader
 - Shelly Plugs (v1 & v2)
 - RasPi / LXC / Proxmox
-

Easily extendable

- Python, Bash, everything that connects to Cap'nProto

What next?

- ✓ ~~0.1 historic Alpha~~
- ✓ ~~0.2 Joris-Alpha (01/2022)~~
- ✓ ~~0.3 public Alpha (41/2022)~~
- ✓ **0.4 Beta (now)**
- 1.0 Stable (Q1 2023)

Primarily talking about the API-Version!
server-/reference-client versioning can differ.
Clients in the AppStores need to fit the version of
the server until 1.0

1.0 ~ layover@BB ~

the more abstraction, the better.

OpenID Connect (keycloak)

even more complex states

“Switch on only when cooling/ventilation is on.”

“Switch off, when the last one has left.”

1.x ~ tbd. ~

Federation

“Workshops have the technical basis for contracts that make life easier for everyone & save plastic cards.”

Blink, colorful, stable & fancy (with glitter)

Team

> 64, growing community

Berlin / Potsdam:

@dequbed (Backend)

@TheJoKILa (Reference & Client)

@rand0mu5eR (Deployment & NFC)

@Knurps (confusion and other things)

Bocholt:

@JorBi (hardware, pain, documentation & more)

nobody: ~~Blockchain~~

Organizations

- Verbund offener Werkstätten (VOW) (<https://www.offene-werkstaetten.org/>)
 - Fab:UNlverse (<https://fab101.de/fabuniverse/>)
 - Berlin university of applied science (BHT) (<http://www.bht-berlin.de/>)
 - RKLM UG
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Supported by ...

- Prototype-Fund (<https://prototypefund.de/>)
- FabCity HH (<https://www.fabcity.hamburg/>)

Give it a try / get involved...

- <https://gitlab.com/fabinfra/>
 - <https://fab-access.readthedocs.io/>
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- <https://www.fab-access.org/>

